

DERWENT-ACC-NO: 2004-200161

DERWENT-WEEK: 200435

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TITLE: Process with improved etching rate ratio of nitride layer to oxide layer and application thereof - for reducing a loss of the gate oxide layer in the process of forming a space wall

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PRIORITY-DATA: 2002TW-0105783 (March 25, 2002)

PATENT-FAMILY:

| PUB-NO      | PUB-DATE       | LANGUAGE | PAGES | MAIN-IPC     |
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| TW 544815 A | August 1, 2003 | N/A      | 000   | H01L 021/465 |

APPLICATION-DATA:

| PUB-NO     | APPL-DESCRIPTOR | APPL-NO        | APPL-DATE      |
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| TW 544815A | N/A             | 2002TW-0105783 | March 25, 2002 |

INT-CL (IPC): H01L021/465

ABSTRACTED-PUB-NO: TW 544815A

BASIC-ABSTRACT:

NOVELTY - A process with an improved etching rate ratio of nitride layer to oxide layer comprises: providing an etching treatment chamber and a substrate; mounting the substrate in an etching treatment chamber; providing a mixture gas of O<sub>2</sub>, N<sub>2</sub> and CF<sub>4</sub>; applying a pressure of 30 to 200 Pa and a power of 100 to 1000W on the mixture gas to etch the substrate.

DETAILED DESCRIPTION - A process with an improved etching rate ratio of nitride layer to oxide layer comprises: providing an etching treatment chamber and a substrate; mounting the substrate in an etching treatment chamber, in which the substrate is formed with a nitride layer; providing a mixture gas of O<sub>2</sub>, N<sub>2</sub> and CF<sub>4</sub>; in which the composition of the mixture gas is O<sub>2</sub>:N<sub>2</sub>:CF<sub>4</sub>=4-50:0-10:1; applying a pressure of 30 to 200 Pa and a power of 100 to 1000W on the mixture gas to etch the substrate.

CHOSEN-DRAWING: Dwg.1/1

TITLE-TERMS: PROCESS IMPROVE ETCH RATE RATIO NITRIDE LAYER OXIDE LAYER APPLY  
REDUCE LOSS GATE OXIDE LAYER PROCESS FORMING SPACE WALL

DERWENT-CLASS: L03 U11

CPI-CODES: L04-C07;

EPI-CODES: U11-C05B9B; U11-C07A1; U11-C07C3;

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